AMENDMENTS TO THE CLAIMS:

Claims 1-39 were pending at the time of the Office Action.

Claims 1, 6, 7, 10, 14-21, 23-27, 32, 33, and 36 are amended, and claims 9, 22, and 35 are canceled.

Claims 1-8, 10-21, 23-34, and 36-39 remain pending.

1. (Currently Amended) A method comprising:

    receiving previously recorded altitude information generated by an inertial navigation system (INS) of an aircraft and altitude information generated by a global positioning system (GPS) of the aircraft; and

    determining altitude information of the aircraft based on the received altitude information generated by the INS of the aircraft and altitude information generated by the GPS of the aircraft, wherein determining altitude information includes performing a curve fit between the INS altitude information and the GPS altitude information.

2. (Original)   The method of Claim 1, further comprising generating a static pressure value based on the determined altitude information.

3. (Original)   The method of Claim 1, wherein the altitude information generated by the GPS includes differentially corrected altitude information.

4. (Original)   The method of Claim 1, wherein determining includes:

    adjusting the altitude information based on known aircraft position defined by a system other than the INS and the GPS.

60483

-2-

5. (Original)   The method of Claim 1, wherein determining includes:

performing an integration of a temperature adjusted vertical velocity value produced by the INS; and

adjusting the result of the integration according to aircraft pitch, roll, and yaw.

6. (Currently Amended) The method of Claim 1 [[5]], wherein ~~determining includes:~~

performing a curve fit between the INS altitude information and the GPS altitude information includes:

if four or more differential GPS points are available, using a second order least squares fit equation.

7. (Currently Amended) The method of Claim 6, wherein performing the curve fit includes:

if three differential GPS points are available, using a first order fit equation, and

if less than three differential GPS points are available, using a zero order fit equation ~~performing a least squares fit between the INS altitude information and the GPS altitude information.~~

8. (Original)   The method of Claim 1, wherein determining includes:

performing a double integration of a vertical acceleration value produced by the INS; and

adjusting the result of the double integration according to aircraft pitch, roll, and yaw.

9. (Canceled)

60483

10. (Currently Amended) The method of Claim 1 [[9]], wherein performing the curve fit includes:

performing a least squares fit between the INS altitude information and the GPS altitude information

11. (Original) The method of Claim 1, further comprising:
  generating impact pressure based on the generated static pressure and previously recorded pressure information from a pitot system of the aircraft.

12. (Original) The method of Claim 11, further comprising:
  generating calibrated airspeed based on the generated impact pressure; and
  performing at least one of building a simulation model based on the calibrated airspeed and determining aircraft performance data based on the calibrated airspeed and altitude.

13. (Original) The method of Claim 12, wherein building a simulation model is further based on previously recorded data from one or more sensors of the aircraft.

14. (Currently Amended) <u>One or more computer readable media containing computer readable instructions that, when executed, perform a method</u> ~~A program product residing on a computer readable medium, the program product~~ comprising:

> ~~first computer program code means configured to receive~~ <u>receiving</u> previously recorded altitude information generated by an inertial navigation system (INS) of an aircraft and altitude information generated by a global positioning system (GPS) of the aircraft; and

> ~~second computer program code means configured to determine~~ <u>determining</u> altitude information of the aircraft based on the received altitude information generated by the INS of the aircraft and altitude information generated by the GPS of the aircraft<u>, wherein determining includes performing a curve fit between the INS altitude information and the GPS altitude information.</u>

15. (Currently Amended) The <u>one or more computer readable media</u> ~~product~~ of Claim 14, <u>wherein the method further comprises generating</u> ~~further comprising a third computer program code means configured to generate~~ a static pressure value based on the determined altitude information.

16. (Currently Amended) The <u>one or more computer readable media</u> ~~product~~ of Claim 14, wherein the altitude information generated by the GPS includes differentially corrected altitude information.

17. (Currently Amended) The <u>one or more computer readable media</u> ~~product~~ of Claim 14, wherein the <u>method further comprises adjusting</u> ~~first computer program code means is configured to adjust~~ the altitude information based on known aircraft position defined by a system other than the INS and the GPS.

60483

- 5 -

18. (Currently Amended) The <u>one or more computer readable media</u> ~~product~~ of Claim 14, wherein the <u>method further comprises performing</u> ~~first computer program code means is configured to perform~~ an integration of a temperature adjusted vertical velocity value produced by the INS and adjust the result of the integration according to aircraft pitch, roll, and yaw.

19. (Currently Amended) The <u>one or more computer readable media</u> ~~product~~ of Claim <u>14</u> [[18]], wherein <u>performing</u> ~~the first computer program code means is configured to perform~~ a curve fit between the INS altitude information and the GPS altitude information <u>includes:</u>

> <u>if four or more differential GPS points are available, using a second order least squares fit equation.</u>

20. (Currently Amended) The <u>one or more computer readable media</u> ~~product~~ of Claim 19, wherein <u>performing</u> the curve fit ~~is a least squares fit between the INS altitude information and the GPS altitude information~~ <u>includes:</u>

> <u>if three differential GPS points are available, using a first order fit equation, and</u>
> <u>if less than three differential GPS points are available, using a zero order fit equation.</u>

21. (Currently Amended) The <u>one or more computer readable media</u> ~~product~~ of Claim 14, wherein <u>determining includes performing</u> ~~the first computer program code means is configured to perform~~ a double integration of a vertical acceleration value produced by the INS and <u>adjusting</u> ~~adjust~~ the result of the double integration according to aircraft pitch, roll, and yaw.

22. (Canceled)

60483

CUSTOMER NUMBER

23. (Currently Amended) The <u>one or more computer readable media</u> ~~product~~ of Claim <u>14</u> [[22]], wherein the curve fit is a least squares fit between the INS altitude information and the GPS altitude information.

24. (Currently Amended) The <u>one or more computer readable media</u> ~~product~~ of Claim 14, <u>wherein the method further comprises generating</u> ~~further comprising: third computer program code means configured to generate~~ impact pressure based on the generated static pressure and at least one of previously recorded pressure information from a pitot system of the aircraft or recorded true airspeed of the aircraft.

25. (Currently Amended) The <u>one or more computer readable media</u> ~~product~~ of Claim 24, <u>wherein the method further comprises</u> ~~further comprising~~:

   ~~fourth computer program code means configured to generate~~ <u>generating</u> calibrated airspeed based on the generated impact pressure; and

   ~~fifth computer program code means configured to build~~ <u>building</u> at least one of the simulation model and aircraft performance data based on the calibrated airspeed and previously recorded aircraft performance data from other sensors of the aircraft.

26. (Currently Amended) The <u>one or more computer readable media</u> ~~product~~ of Claim 25, wherein <u>building includes building</u> ~~the fifth computer program code means is further configured to build~~ at least one of the simulator model and aircraft performance data based on previously recorded data from one or more sensors of the aircraft.

27. (Currently Amended) An apparatus comprising:

memory for storing recorded altitude information generated by an inertial navigation system (INS) of the aircraft and altitude information generated by a global positioning system (GPS) of the aircraft;

one or more user interface devices; and

a processor coupled to the memory and the one or more user interface devices, the processor including:

a first component configured to determine altitude information of the aircraft based on the received altitude information generated by the INS of the aircraft and altitude information generated by the GPS of the aircraft, wherein determining includes performing a curve fit between the INS altitude information and the GPS altitude information.

28. (Original)   The apparatus of Claim 27, wherein the processor further includes a second component configured to generate a static pressure value based on the determined altitude information.

29. (Original)   The apparatus of Claim 27, wherein the altitude information generated by the GPS includes differentially corrected altitude information.

30. (Original)   The apparatus of Claim 27, wherein the first component is configured to adjust the altitude information based on known aircraft position defined by a system other than the INS and the GPS.

31. (Original)   The apparatus of Claim 27, wherein the first component is configured to perform an integration of a temperature adjusted vertical velocity value produced by the INS and adjust the result of the integration according to aircraft pitch, roll, and yaw.

60483

32. (Currently Amended) The apparatus of Claim 27 [[31]], wherein performing ~~the first component is configured to perform~~ a curve fit between the INS altitude information and the GPS altitude information includes: if four or more differential GPS points are available, using a second order least squares fit equation.

33. (Currently Amended) The apparatus of Claim 32, wherein performing the curve fit includes:

> if three differential GPS points are available, using a first order fit equation, and
>
> if less than three differential GPS points are available, using a zero order fit equation ~~the curve fit is a least squares fit between the INS altitude information and the GPS altitude information.~~

34. (Original) The apparatus of Claim 27, wherein the first component is configured to perform a double integration of a vertical acceleration value produced by the INS and adjust the result of the double integration according to aircraft pitch, roll, and yaw.

35. (Canceled)

36. (Currently Amended) The apparatus of Claim 27 [[35]], wherein the curve fit is a least squares fit between the INS altitude information and the GPS altitude information

37. (Original) The apparatus of Claim 27, further comprising:

> a third component configured to generate impact pressure based on the generated static pressure and previously recorded pressure information from a pitot static system of the aircraft.

60483
CUSTOMER NUMBER

38. (Original)   The apparatus of Claim 37, further comprising:

a fourth component configured to generate calibrated airspeed based on the generated

impact pressure; and

a fifth component configured to build at least one of the simulation model and aircraft

performance data based on the calibrated airspeed and previously recorded data

from other sensors of the aircraft.

39. (Original)   The apparatus of Claim 38, wherein the fifth component is further

configured to build at least one of the simulator model and aircraft performance data based on

previously recorded data from one or more sensors of the aircraft.